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RemarksA. Period For Reply

A shortened statutory period was set to expire three months from the Office Action of March 7, 2005. March 7, 2005 plus three months is June 7, 2005. This Amendment and Remarks is being filed on or before Tuesday, June 7, 2005.

B. Status

The Office Action was non-final.

C. Disposition Of Claims

Claims 1-5 and 7-20 are pending.

D. Application Papers

This application includes no drawings.

E. Priority under 35 U.S.C. §§ 119 and 120

Acknowledgment of the claim for foreign priority was made in the Office Action of March 7, 2005. This is appreciated.

Acknowledgment of the receipt of the priority document was made in the Office Action dated March 7, 2005. This is appreciated.

As to domestic priority, this case does not claim domestic priority.

F. Attachments

Applicant has filed seven PTO-1449 forms in this case (six with the filing of this case on January 6, 2002 and one on October 13, 2004). All of the forms have been signed and returned. All of the listings of references have been initialed. Such is very much appreciated.

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G. Basis for amendments

The original claims in this case were claims 1-7. Original claims 1-6 were apparatus claims. Original claim 7 was a process claim. No restriction requirement has been made.

All claims in this case now recite a process. Basis for such is original claim 7.

As to the amendments to claim 1 specifically, basis for "a plurality of reaction tubes" is found in paragraph [0010] of the published application. Basis for steps "a" and "b" is found in original claim 1. Basis for the limitation "according to a density" is found in paragraphs [0030] to [0042] of the published application. Basis for the term "amount" is found at least in paragraph [0075] of the published application.

As to the amendments to claims 2-5 specifically, basis for such amendments are the respective original claims 2-5.

Claim 6 has been canceled.

As to the amendment to claim 7, basis for such amendment is at least original claim 1.

Basis for new claim 8 is found at least in paragraph [0042] of the published application.

Basis for new claims 9-17 is found at least in original claim 6, which has been canceled.

Basis for new claims 18-19, relating to bulk density and apparent density, is found at least in paragraphs [0030] to [0042] of the published application.

Basis for new claim 20 is found at least in paragraphs [0010] and [0031] of the published application. New claim 20 recites the solid particulate material of the different production lots having different densities. "Two or more catalyst-producing units" in paragraph [0031] provides basis

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for the phrase "at least."

H. The Office Action

H.1. Sections 1-3 of the Office Action

In section 1 of the Office Action, a quotation of the second paragraph of 35 U.S.C. 112 was set out. In section 2 of the Office Action, claim 7 was rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Section 3 of the Office Action explains the basis for the rejection.

The subject matter of original claim 7 has been replaced by other subject matter. It is respectfully submitted that the present subject matter of claim 7 is in compliance with 35 U.S.C. 112, second paragraph.

H.2. Sections 4-5 of the Office Action

In section 4 of the Office Action, 35 U.S.C. 101 was set out. In section 5 of the Office Action, claim 7 was rejected under 35 U.S.C. 101.

The subject matter of original claim 7 has been replaced by other subject matter. It is respectfully submitted that the present subject matter of claim 7 is in compliance with 35 U.S.C. 101.

H.3. Sections 6-7 of the Office Action

In section 6 of the Office Action, paragraphs "b" and "e" of 35 U.S.C. 102 were set out.

In section 7 of the Office Action, claims 1-6 were rejected under 35 U.S.C. 102(b) as being anticipated by Tazaki et al. (5,264,627). This rejection is respectfully traversed on the basis of applicant's discussion in section I. of this paper.

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H.4. Section 8 of the Office Action

In section 8 of the Office Action, claims 1-6 were rejected under 35 U.S.C. 102(e) as being anticipated by Matsumoto et al. (6,808,689). This rejection is respectfully traversed on the basis of applicant's discussion in section I. of this paper.

I. Applicant's discussion

I.1. Further basis for applicant's independent claim 1

Basis for independent claim 1 is set out above in section G. of this paper. Further basis for independent claim 1 is found below.

Density is mass over volume. Applicant aims for a uniform volume of solid particulate material in a plurality of reaction tubes and accomplishes this goal by weighing out scores of amounts of solid particulate material.

The production of a catalyst provides a first production lot. The production of the same catalyst at a different time provides a second production lot. The catalysts of the different production lots may have different densities. Please see paragraphs [0010] and [0076] of the published application.

The densities of the production lots are determined. The densities determined can be bulk densities or apparent densities. Please see paragraphs [0030] to [0042] of the published application.

Solid particulate material can include inert substances such as ceramic balls. Please see paragraph [0014] of paragraph [0076] of the published application. Solid particulate material can include first and second catalysts. Please see paragraph [0076] of the published application.

Based upon the determined densities of the catalysts

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and inert substance, the necessary amount of the solid particulate material was produced scores of times for 15,000 reaction tubes. Please see paragraphs [0075] and [0089] of the published application. This production of scores of times is a weighing out of scores of times. Please see paragraphs [0010], [0011], [0031], [0091] and [0094] of the published application.

I.2. Advantages of a weighing out

As discussed in paragraph [0010] of the published application, catalysts have differences as to shape, size, and density among respective production lots, that when these are packed in the plurality of reaction tubes, the amount of the catalyst packed therein is greatly varied, and that it requires much time and labor to adjust the length of a layer of the packed catalyst and the pressure drop.

As discussed in paragraph [0031] of the published application, the labor for adjusting the length of the packed catalyst layer and the pressure drop is greatly diminished by weighing the catalyst so as to be uniform in volume when the catalyst is packed in each of the reaction tubes.

I.3. The Tazaki et al. reference

The Office Action points out column 5, lines 45-57 and column 8, lines 54-59 of the Tazaki et al. reference as to uniform packing and as to a length of the packed layers. It is noted that the passage of column 8, lines 54-59 of the Tazaki et al. reference discusses 24 reaction tubes packed in the form of a bed 1,700 mm in height.

How did Tazaki et al. attain the 1,700 mm height? Was a mark made on the outside or inside of the reaction tube at the 1,700 mm height and the catalyst poured in? It appears

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that Tazaki et al. does not teach how the 1,700 mm height was attained.

Is the same volume of catalyst in each of the 24 reaction tubes of Tazaki et al.? It appears that the Tazaki et al. reference does not let us know. Perhaps the catalysts in the tubes were packed relatively tightly in some tubes and relatively loosely in other tubes.

Moreover, in the above noted passages of Tazaki et al., or in Tazaki et al. as a whole, there is no disclosure of either of the following steps:

- a step of weighing out a predefined amount of solid particulate material; or
- a step of weighing out a predefined amount of solid particulate material according to a density of the solid particulate material.

It is respectfully submitted that packing to a same height is not a teaching or suggestion of a prior step of weighing to a predefined amount.

It is respectfully submitted that packing to a same height is not a teaching or suggestion of a prior step of weighing to a predefined amount according to a density of the solid particulate material.

It is therefore respectfully submitted that independent claim 1 is allowable over the Tazaki et al. reference.

I.4. The Matsumoto et al. reference

The Office Action points out column 19, lines 34-38 of the Matsumoto et al. reference as to uniform packing.

What is uniform packing? It would appear that the Matsumoto et al. reference does not let us know. It is respectfully suggested that the phrase "uniform packing" is ambiguous. Does "uniform packing" relate to the relative tightness or relative looseness of the pack?

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How was the uniform packing attained? It would appear that the Matsumoto et al. reference does not let us know.

Regardless of how the questions of "what is uniform packing" and "how is the uniform packing attained" are answered, such answers do not disclose or teach either of the following steps, and the Matsumoto et al. reference as a whole does not disclose or teach either of the following steps:

- a step of weighing out a predefined amount of solid particulate material; or
- a step of weighing out a predefined amount of solid particulate material according to a density of the solid particulate material.

It is respectfully submitted that a disclosure as to a uniform packing is not a teaching or suggestion of a prior step of weighing to a predefined weight.

It is respectfully submitted that a disclosure as to a uniform packing is not a teaching or suggestion of a prior step of weighing to a predefined weight according to a density of the solid particulate material.

It is therefore respectfully submitted that independent claim 1 is allowable over the Matsumoto et al. reference.

I.5. The end results of the Tazaki et al. and Matsumoto et al. references do not relate to the end result of applicant's invention

The end result of applicant is a uniform volume of solid particulate material in each of the reaction tubes. This end result is obtained by weighing out a predefined amount of solid particulate material according to a density of the solid particulate material. Density is mass over volume.

Please note that, in contrast to Tazaki et al.,

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applicant acknowledges that length (i.e., height in Tazaki et al.) after packing will not be the same. Please see dependent claim 3 of applicant where applicant calls out a range to the lengths of the solid particulate material packed in the reaction tubes.

Please note that, in contrast to the "uniform packing" of Matsumoto et al., applicant acknowledges that pressure drops across the reaction tubes will not be the same. Please see dependent claim 2 of applicant where applicant calls out a range to applicant's pressure drops.

J. New claims

Consideration of new claims 8-20 would be appreciated.

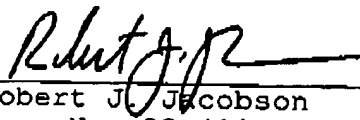
K. Summary

The Tazaki et al. reference, or the disclosure in the Tazaki et. al. reference as to height, does not lead to any of 1) weighing out, 2) weighing out according to density, or 3) uniform volume of the solid particulate material.

The Matsumoto et al. reference, or the disclosure of uniform packing in the Matsumoto et al. reference, does not lead to any of 1) weighing out, 2) weighing out according to density, or 3) uniform volume of the solid particulate material.

The Examiner is respectfully invited to make contact with the undersigned by telephone if such would advance prosecution of this case.

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